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09/891,030	06/25/2001	Kurt Zimmerman	KZIMM.001A	9444

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EXAMINER	
SHORTLEDGE, THOMAS E	
ART UNIT	**PAPER NUMBER**
2654	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,030	ZIMMERMAN, KURT	
	Examiner	Art Unit	
	Thomas E. Shortledge	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06/25/2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Remarks filed 09/09/2005.

2. Claims 1-32 are pending in the application. Claims 1, 3-5, 7, 10-12, 15, 17-19, 21, 24-28 have been amended. Claims 29-32 have been added.

Response to Arguments

3. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 29-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant states in claims 1 and 15 that the output is a non-language graphic image, and then further states the non-language graphic image comprises a language component consisting of letters, numbers and words. This is a contradiction; if a graphic image contains a language component it cannot be purely a non-language graphic image, as the

meaning of the output can be derived from the language component, making the output dependent on the language component as well as the image.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakiyama et al. (5,659,764) in view of Greene, Jr. et al. (6,377,925).

As to claim 1, Sakiyama et al. teach:

a speech input responsive to verbal communication, (a voice interface unit for converting a signal sent from the microphone into a kana and kanji coexistent sentence recognizable by a computer, col. 8, lines 24-26);

a speech recognition processor responsive to said speech input and creating an electronic output representing said verbal communication, (a voice recognition apparatus for creating a textual output from a voice input, col. 8, lines 26-28);

a database storing words and graphic image designators corresponding to said words, (sign language word CG pattern storage, allowing the input to be matched to sign language-like expression, col. 8, lines 38-41, and line 48);

a processor responsive to said electronic output representing said verbal communication to access a graphic image designator from said database which represents said verbal communication, (a spoken language processing unit for performing a spoken language analysis of the inputted voice language composition, rearranging sign language words so that they may meet a sign language-like expression, col. 8, lines 37-41); and

a graphic image generator responsive to said graphic image designator to generate a graphic image, which represents said verbal communication, (CG animation generation unit for supplying a graphic, matching the voice input, col. 8, lines 38-41, and 46-48).

Sakiyama et al. do not teach non-language graphic image designators.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for

the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claim 15, Sakiyama et al. teach:

a text source for generating electronic output representing words (a kana and kanji coexistent sentence recognizable on a computer, realizable by a voice recognition apparatus, col. 8, lines 27-29);

a database storing words and graphic image designators corresponding to said words (a CG pattern storage in accordance with an arrangement of sign language words, with the sign language animations, col. 8, lines 47-50),

a processor responsive to said electronic output representing words to a access a graphic image designator from said database which represents said words (a CG animation generation unit applies a sign language animation to the corresponding sign language word denoted by the spoken language processing unit, col. 8, lines 46-48); and

a graphic image generator responsive to said graphic image designator to generate a graphic image which represents said words (a CG animation generation unit applies a sign language animation to the corresponding sign language word denoted by the spoken language processing unit, col. 8, lines 46-48).

Sakiyama et al. do not teach non-language graphic image designators.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or

phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claims 2 and 16, Sakiyama et al. teach at least one computing device, which includes said speech processor (computer with a voice recognizer, col. 8, lines 28-30).

As to claims 3 and 17, Sakiyama et al. teach at least one computing device is selected from the group consisting of personal computers, workstations, servers, clients, mini-computers, main-frame computers, laptop computers, mobile computers, palm-top computers, hand-held computers, set top boxes for a television, web-enabled televisions, interactive kiosks, personal digital assistants, interactive wireless communication devices, web-enabled wireless communication devices, mobile web browsers, pagers and cellular phones, (a computer with a voice interface, (col. 8, lines 27-28). It would have been obvious to one of ordinary skill in the art at the time of the invention that this computer

could be any type of computer, including a personal computer, laptop computer, mobile computer, or client computer, to increase the flexibility of the system).

As to claims 4 and 18, Sakiyama et al. teach at least one computing device comprises a display screen for displaying said graphic image (display screen, col. 8, lines 54-55).

Sakiyama et al. do not teach non-language graphic image.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claims 5 and 19, Sakiyama et al. teach one computing device accessing a network (Fig. 22, depicts two computer devices linked together for communication, creating a network)

As to claims 6 and 20, Sakiyama et al. teach the speech recognition processor comprises an acoustic processor and a word decoder, (a voice interface unit for converting a voice input signal from a microphone into a kana and kanji coexistent sentence recognizable by a computer, col. 8, lines 25-28).

As to claims 7 and 21, Sakiyama et al. teach the graphic image is selected from the group consisting of static pictures, moving pictures, and animations (computer graphic (CG) patterns) (assigning a CG patterns to the corresponding sing language word (col. 8, lines 38-40), where it would have been obvious to one of ordinary skill in the art at the time of the invention for the patterns to include, static pictures, moving pictures, and animations as communication involving sign language involves postures that are static and also moving, and as a result the static pictures, moving pictures, and animations would be needed to properly display the language).

Sakiyama et al. do not teach non-language graphic image.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for

the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claims 8 and 22, Sakiyama et al. teach the speech recognition processor comprises a syntax module (converting the voice input into kana and kanji coexistent sentences, and then using these sentences to link together the corresponding sign language animations, and rearranging sing language words so they meet a sign language-like expression, (col. 8, lines 26-28, and col. 10, 39-42). It would have been obvious to one of ordinary skill in the art at time of the invention that as the words are being rearranged so that they may meet a sing language-like expression, they would be placed in the order that creates the best grammatical expression).

As to claims 9 and 23, Sakiyama et al. teach the speech recognition processor comprises a phrase correlator, (a spoken language processor that performs analysis on the inputted voice language composition, finds each of the sign language words, and then creating sign language-like expression from the sign language words, col. 8, lines 37-44). It would have been obvious to one of ordinary skill in the art at the time of the invention that every phrase or grouping of sign language words that has the same meaning would have the same sign language-like expression created for it to increase the ability of the aurally handicapped person to speak with an aurally normal person).

As to claims 10 and 24, Sakiyama et al. teach:

inputting verbal communication to a processor (a microphone for inputting words, col. 8, lines 24-26);

matching, in said processor, said verbal communication with graphic, images representing said verbal communication (matching the verbal communication with an animation representing a sign language, col. 8, lines 38-41, and lines 48-50); and

outputting from said processor said graphic images (displaying the animations on a display device, col. 8, lines 52-55).

Sakiyama et al. do not teach non-language graphic image.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claims 11, and 25, Sakiyama et al. teach transmitting said graphic images to a display screen (displaying the animations on a display device, col. 8, lines 52-55).

Sakiyama et al. do not teach non-language graphic image.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claims 12 and 26, Sakiyama et al. do not teach responding to graphic images by inputting additional verbal communication (Fig. 22 depicts a communication network, where output is to both users through monitors, (elements 7 and 28), whereby when the aurally normal user receives a communication they are able to reply through the microphone, transmitting a message to be transformed and displayed to the aurally handicapped users).

Sakiyama et al. do not teach non-language graphic image.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claim 13, Sakiyama et al. teach inputting verbal communication comprises speaking (a microphone for inputting a voice, col. 8, lines 24-26).

As to claims 14 and 28, Sakiyama et al. teach inputting verbal communication and said step of responding by inputting additional verbal communication are undertaken by different users, (Fig. 22 depicts a communication network, where output is to both users through monitors, (elements 7 and 28), whereby when the aurally normal user receives a communication they are able to reply through the microphone, transmitting a message to be transformed and displayed to the aurally handicapped users).

As to claim 27, Sakiyama et al. teach step of inputting words comprises using a keyboard, mouse, touch-pad, joystick, or pen-input-pad (a keyboard or motion sensor input, Fig. 1A, elements 3 and 8).

As to claims 29 and 31, Sakiyama et al. do not teach the non-language graphic element image comprises a language component disposed on or about said non-language graphic image.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon, where it would be obvious to one of ordinary skill in the art that since pictures of items can be used to represent the input words, pictures of signs would include a language element.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

As to claims 30 and 32, Sakiyama et al. do not teach the language component is selected from the group consisting of letters, numbers, and words.

However, Greene, Jr. et al. teach an image or animation translator, where the animation can portray cartoons, and the images are related to each word or phrase, pictures of items, etc. For example, the word "cow" can be associated to an image of a cow, while the phrase "cow jumped over the moon" can be associated with an animation of a cow jumping over the moon, where it would be obvious to one of ordinary skill in the art that since pictures of items can be used to represent the input words, pictures of signs would contain letters, numbers, and words, further allowing the user to understand what the picture represents, since the signs would contain these elements in the real world.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sakiyama et al. with the methods of Greene, Jr. et al. to create an improved communication system for the hearing impaired, by associating images and animations with the input to be communicated, as taught by Greene Jr. et al. (col. 1, lines 19-32).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E. Shortledge whose telephone number is (571)272-7612. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TS
11/23/2005

VIJAY CHAWAN
PRIMARY EXAMINER